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CONTENTS

Chance and Circumstance: Are Laws of History Possible? STANLEY LEBERGOTT 393

Comments and Criticism 411

Human Freedom and the Laws of Nature: GARDNER WILLIAMS.

Book Notes 416

NORMAN FOERSTER, *editor, The Humanities after the War.*

The Baconian Lectures, 1943.

CARLOS ASTRADA, *El juego metafísico.*

J. R. GARCÍA BÁRCENA, *Esquema de un correlato antropológico en la jerarquía de los valores.*

Other New Books and Journals 420

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THE JOURNAL OF PHILOSOPHY

CHANCE AND CIRCUMSTANCE: ARE LAWS OF HISTORY POSSIBLE?

IT has not been so very many years since the wide, pleasant reaches of historical theory were swept by loud alarms of struggle and flight. For it was then that Comte, Taine, and Buckle laid seige to the ancient and honorable practices of the chroniclers. But latterly the winds of doctrine have died down. Other humanistic studies have been quickened and broadened by the development of econometrics, psychometrics, and half a dozen similar ungraciously named adjuncts. But the domain of history has, if anything, become more peaceful, and historians in fuller agreement that history is not a science *pur sang*, nor can ever become one. For a science, they tend to insist, has a prospect something like that of an eighteenth-century formal garden: neat, precise, and ubiquitously regular. And the materials of science fall into the unexceptionable pattern of cause and effect with a dazzling effortlessness. History, on the other hand, like its subject, man, is the storied home of disorder, passion, and tumult. And its catalogue of riot and love, gross inequity and mild justice, will forever make any seeking after laws a futility, their achievement a catachresis.

These notes attempt a contrary view. They seek to establish that the presence of "chance" and the most garish factors of emotion and action need not necessarily prevent the development of historical laws. They seek, further, to suggest that the laws of natural science are, in general, much more modest, much less impeccably correct, than we are wont to think. And finally, they infer that the achievement of laws of history no less rigorous than many of the laws of natural science is not an impossible dream.

It must be granted that there can be few historians who would accept the creed of "chance" as it is somewhat baldly presented in the following pages. It is true, *a fortiori*, that few historians actually write history in accordance with these thirty-nine articles. Yet there seems to be little reason to question the active, if obscure, presence of these postulates in a great deal of thought on the name and nature of history, and, in consequence, there seems to be adequate justification for attempting their analysis.

The chief *a priori* objections to the contention that history, like

science, can have its laws generally fall back upon one of two main definitions of "chance." Each of these merits particular attention.

I

Chance as defined by one group is more or less rigorously classified as "une rencontre irrépétitionnelle ou irrégulièrement répétitionnelle de deux séries indépendantes d'événements."[1] Thus in Cournot's famous example "un bourgeois de Paris" dies in a holiday train wreck. "Les causes qui ont amené l'accident ne tiennent pas à la présence de ce voyageur: elles auraient eu leur cours de la même manière lors même que le voyageur se serait déterminé, par suite d'autres influences, ou de changements survenus dans son monde, à lui, à prendre une autre route."[2] The event, necessarily inexplicable "sous la forme d'une série individuelle suivant la logique intérieure autonome, ni par leur soumission à une loi répétitionnelle quelconque,"[3] could not have been predicted. Therefore, laws are impossible.

The train of argument is smooth, consistent, and impeccable. It is unfortunately beside the point. It proves and proves beyond doubt one point: that we can not from the midst of our present ignorance satisfactorily predict particular events. It does not, for it can not, prove that noumenal realities and the structure of the mind are such that laws and prediction may not be largely feasible in the future. It is, of course, obvious that historians can not predict many events—almost as obvious as the fact that Boethius for all his wisdom could not predict the movement of Uranus or that Jenner could say little about the mechanism of yellow-fever transmission. But only the most hardened solipsist could erect our present ignorance into a permanent noetic principle. For as astronomy has proceeded from Boethius to Stetson and Millikan, and medicine from Paracelsus to Ehrlich and Domagk, laws have proliferated and man's ability to predict physical events has vastly increased. What has occurred is clear: chance events have been repeated. The meetings of different trains of influence have become "englobées en un système totalisé, ou unique"; and, losing their characteristic aleatoriness, they have come to obey "une loi répétitionnelle."[4] Chance, the quondam idol of a former day, diminishes in stature and what was once a permanent epistemological

[1] J. Delevsky, "Le Hasard dans la Nature et dans l'Histoire," *Revue Philosophique*, Vol. 120 (Juillet-Août, 1935), p. 83. Cf. G. Yule and M. G. Kendall, *An Introduction to the Theory of Statistics* (1940), p. 38.

[2] A. A. Cournot, *Essai sur les Fondements de nos Connaissances et sur les Caractères de la Critique Philosophique* (1851), I, p. 52.

[3] Delevsky, *op. cit.*, p. 88.

[4] Delevsky, *op. cit.*, p. 83.

impediment becomes a simple, though hardly facile, *a posteriori* problem: how best to extend and organize our knowledge of affairs so that we can develop laws and extend the range of prediction?[5] The historian, though granting that the dark retrospect of the past is still largely unfathomed, has none the less the right to assume as a working hypothesis that history may repeat the slow progress of natural science. And he has the duty to consider in what measure persistent pointing to the inevitable impediments will accomplish more than to stop historians from getting on with the difficult task of deriving historical laws. Our ignorance today, our inability to predict historical matters, is no more proof of our inevitable failure at a future date to predict than the ignorance of the Phoenicians and Babylonians was proof of the certain failure of later scientists. History takes its origin, not its end, in such complexities.[6]

II

But although "chance" (meaning the unpredictable) does not bulk very large in the hopeful path of those who seek laws of history, there is a second, more effective, usage. It is an easier one, more casual, more brilliant, and rhetorically far more effective. Under the sign of this "chance" portents appear and strange deeds have their being. A graceful intriguing woman brings to an end the majesty of the Third Republic; a soldier on a lonely lowland beach loses the World War for the Central Powers; and, archetype of all, a kingdom falls for want of a nail. Reason holds the domain of history but loosely, and indeterminism, or chance, is forever making inroads into it. The repetition of analogous events does not always produce identical results, and not all events are in the causal chain.[7] In history, remarked a great English historian, "only one emergency following upon another" can be seen; "the

[5] Scholars are forever transcending their present ignorance although it is clear that at any given time, as Cohen insists, there will be events which we can not foresee because of our perpetually limited information, abilities, and background. M. R. Cohen, "The Statistical View of Nature," *Journal of the American Statistical Association*, Vol. 31 (1936), p. 343.

[6] As a recent writer has sensibly insisted: the natural sciences have "continually revised their premises"; should not history have the same privilege? P. P. Wiener, "On Methodology in the Philosophy of History," this JOURNAL, Vol. XXXVIII (1941), p. 323. Cf. Agassiz's blunt perceptive comment: "Judgments formed today—perhaps with full confidence, perhaps with misgiving—may tomorrow with the discovery of new material or some hitherto undetected point of structure have to be . . . decided anew." Quoted in Gamaliel Bradford, *As God Made Them* (1929).

[7] Delevsky, *op. cit.*, p. 83. Cf. F. J. C. Hearnshaw, "History as a Science," *Scientia*, Vol. 51, pp. 230, 235 and the cautious tempered presentation in Sidney Hook, *The Hero in History* (1943), pp. 135, 199, 251 and *passim*.

historian must recognize in the development of human destinies the play of the contingent and the unforeseen."[8] The swift, unpredictable scattering of these forces makes "the situation of mankind at any given moment [differ] in vital particulars from any previous situation. . . . That has always been true and will always be true. Hence it is that we can have no precise laws as in mathematics; that history can never be a science in that highly rigid sense."[9]

The case for "chance" *qua* indeterminism as a lasting obstacle to the attainment of historical law does not, however, derive its greatest strength from any such hortatory considerations. Its breadth of conviction comes primarily from another source—an endless iridescent series of historical *exempla*. None, perhaps, has been more frequently offered or more attentively considered than the life of Alexander the Great. The prodigious career which transformed the isles of Greece and Asia Minor and which still astounds the historians of Europe and America is certainly the finest example of the importance of that secret mover of history, chance. For Alexander, whom we know to have been a strong ruler and able despot, might have been a weakling successor to Philip, no more effective than Richard Cromwell. But in that event, "there would have been no Alexander the Great . . . no Macedonian conquest of Asia Minor and Persia [and] . . . the course of all ancient and mediaeval history would have been profoundly different."[10] Or, to proceed to a further proof: in 1884 "Lord Cromer had a severe cold which temporarily cost him his voice so that at Cairo he could not impress upon Gordon all the instructions he was to follow at Khartoum."[11] Unhampered by the politic counsels which a healthy Cromer would certainly have offered, Gordon rushed precipitously off to the wars. Casual as this journey might have seemed, it at once fixed the future of the Sudan, the tribesmen, and indeed "the destiny of Egypt itself."[12]

[8] H. A. L. Fisher, *A History of Europe* (1936), I, p. vii. Cf. also the excellent and unfortunately brief argument of Bury in "Darwinism and History" in Haeckel *et al.*, *Evolution in Modern Thought* (N. Y., 1917). Bury, though a vigorous highly able spokesman for chance, has made the amusing admission that "on days when I am a determinist, I look on history in one way, and on days when I am an indeterminist in quite another." Quoted in L. S. Wood, *Selected Epigraphs* (1930), p. 2.

[9] Allan Nevins, *The Gateway to History* (1938), p. 29.

[10] C. Oman, *On the Writing of History*, p. 34.

[11] *Ibid.*

[12] *Ibid.* Cf. also pp. lx, 8 for a discussion of "the powerful rôle which fortune or accident plays in history."

Cf. the reasoning of a historian of science who argues that "England would not have won the [World] war" had Freeth not applied the phase rule

Such examples can readily be duplicated in this casual musing or that serious study on the nature of history. And no one can object to the fine enameled glitter which such suppositions cast on the too often drab patterns of history. But the task at hand requires these examples to serve not alone a decorative function but also a demonstrative one. We are in search of some valuable proof of the rôle of "chance" (*qua* indeterminism) in historical affairs, and not an exuberance of fancy. But it is just here that these examples fail of their purpose. Their use fails, interestingly enough, because of the very sumptuosity of proof it affords us: it is too excellent a proof by far. For it applies equally well to a thousand other hypothecations, to a million other fancies. It applies to propositions which directly controvert the suppositions of Oman and Bury. It applies to other propositions which—though not preposterous in the least—make of history a senseless morass. And it applies to propositions which systematically establish not chance, but a rigid and utterly exact determinism.

By what token can believers in the method of hypothecation balk at such examples as the following?

(1) If Alexander had proved to be as weak as Richard Cromwell, he would have been overthrown by a member of his bodyguard who, strong, energetic, and commanding as Alexander himself, would then have proceeded to carve out an empire almost identical with the one which Alexander did in fact create.

(2) If Philip had succumbed to the usual vices available during his time, he might have renounced the cares of empire at an early age to spend the remainder of his days in continuous crapulence with the sailors of the Piraeus—thus leaving no empire for Alexander to extend.

(3) If Alexander had been gifted with the stamina of Charles Atlas, the genial spirits of Willy Howard, and the longevity of Mr. Justice Holmes, he might have established a far more permanent empire, future contests between Greek and Persian would not have occurred, and the democracies of Greece would have lasted far into the future.

(4) Had Robespierre (or Cromwell, or Jefferson, or Lenin) never lived, someone else would have been stimulated and hedged about by the fundamental forces of the time, so that his leadership would

so as to develop the commercial production of sufficient ammonium salt (J. G. Crowther, *The Social Relations of Science*, 1941, p. 411). Cf., too, the even more spectacular conclusion of an economic historian that had Benjamin Strong, governor of the Federal Reserve System, "had twelve months more of vigorous health we might have ended the depression in 1930, and . . . [the] world crisis that so profoundly affected the ensuing political developments" (Carl Snyder, *Capitalism the Creator*, 1940, p. 203).

have been similar in nature and not substantially different in effect from that of Robespierre's.[18]

Some of the examples we can conjure up will make very good sense indeed. Others will seem trivial or nonsensical. But once we admit the use of hypothetical examples, how can any of them be ruled out of order? Some of these examples will imagine one series of situations; others will imagine the exact opposite of those situations. And perhaps one historian, blessed with the energy and imagination, could think up such a plethora of suppositions that no particular life we choose to mention—Alexander, or Cromer, or Robespierre—will appear to have any meaning or importance. We become involved in a delicate and insoluble problem. Must we uniformly accept the hypothecations of Professor A, or of B, or of C, or yet again of D? Must we allow a special credibility to the supposition which singles out Alexander, to that which points to Philip, or to that which underscores the importance of Darius? And if we must, are we still operating within the sphere which can prove a rôle for chance? Some choice must be made between supposition *A*, not *A*, *B*, *Q*, *Z*, but how is a reasonable man to choose between them unless he allows a special credibility to his favorite hypothecator?

After having thus apparently proved too much for the felicity of the case for chance, these examples work toward the other extreme of proving too little. The second objection to them, and to the case which they seek to substantiate, is simply this: no quantity of "ifs" or "might-have-beens" constitutes any proof whatever of the "powerful rôle which fortune or accident plays in history." Chance will appear in their conclusions only when illegitimately inserted in their premises. That can perhaps be best indicated by analyzing the class of "might-have-beens."

Despite the implication present in the use of these imaginary situations, there is no limited class of "might-have-beens." There is a whole world of them: the world of possibility. The events we know are only a modest selection from its vastness. Since only one set of events are possible at any given time, many conceivable potentialities must be left crowding the door between the possible and

[18] This particular example is intentionally based upon the suppositions offered not by believers in chance but by adherents of determinism. For when they refer to "what must be the inevitable course of future events" (V. Adoratsky, *Dialectical Materialism*, 1934, p. 7) or to "a something that is an inevitable necessity of life" (O. Spengler, *The Decline of the West*, 1929, I, p. 118) they too deal in suppositions. That this invokes the picture of a Gilbert and Sullivan performance, with the leading rôle taken by an apparatus of "oh mighty must, oh inevitable shall," is nothing to the point. In the realm of pure supposition, all must be welcome.

the real. Thus, the earth is at present an oblate spheroid. This fact leaves in the realm of possibility an earth which is cubical, one which is a perfect sphere, one which is a pyramid. Similarly, we may contrast the actual world of men and its incredible mixture of good and evil with a world that was madly designed and relentlessly motived by evil, or with a might-have-been world that was the best of all possible ones (despite Leibniz, that hardly seems to be an actuality). Alexander, son of Philip, was the Great. He might have been the Idiot, the Scholar, the Poet, the Ascetic, or the shepherd's son unknown to history. Cromer was a great political leader. He might have been a commanding figure in the Established Church, having taken orders at twenty-one. He might have been seized with intimations of immortality and, turning to literary pursuits, have devoted his life to writing political leaders in *The Times*.

The bright realm of possibility is able to include all these "might-have-beens," plus many more. But no matter how many "might-have-beens" there may be, that fact is nothing to the point. The only relevant fact pertaining to the present problem—which is the size of the powerful rôle of chance—is how the selection of "might-have-beens" proceeds. Is the principle of selection, or concretion, to use Whitehead's phrase, at work one which admits of chance? Or is it determinate? The fact of possibility is irrelevant to our problem. We are concerned not with the existence of "might-have-beens" but with the selection of "might-have-beens." We know that there are countless possibilities. But only if it can be proved that the selection from possibility for actuality is a chance selection—only then can we use this as proof for the rôle of chance. Actually we can not prove either chance or determinism from the presence of "might-have-beens," even were they heaped up and overflowing.

Yet something further can be said. It is something which cants the case in favor not of chance but of determinism. For we know that however the selection is made, it is not a completely haphazard job. It must bear an intimate relationship to the world antecedent to that selection. The present is a prolongation, it is "a growth out of the past, As a projectile form'd, impell'd, passing a certain line keeps on. . . ." Were it otherwise, history would be meaningless sound and fury. Revolution in 1927 America would then be as likely to flare forth as not. England at the peak of her commercial career might or might not—the matter is indifferent—have broken off relations with other countries in favor of autarchy and isolation.

Now clearly there must be few historians who would accept such flagrant improbabilities. But many historians, drawing back though they will from these, will still adhere to the doctrines of chance. They accept a middling rôle for the aleatory—less startling than omnipotence, but still of direct significance to the historian. There is no completely convincing argument against this particular method of dealing in probabilities. Yet there are several quite relevant, though *ad hominem,* reasons which would prevent their tenanting this middle ground.

The first of these points to the interesting fact (it is no more) that the examples in which a middling chance appear are generally found in popular works or theoretical surveys. They do not usually appear in historical monographs where careful, detailed explanation is the order of the day. Furthermore, a surprising number of the examples are selected from other fields than those in which the historian is peculiarly competent. A historian of colonial America will select an incident occurring in the ancient world. A specialist in the Middle Ages will refer to Victorian England. Partly, no doubt, this is due to their consideration for their readers, to a desire for the example selected to be known to all. But to what extent is this differential distribution of examples a result of the fact that this type of explanation, if offered in a monograph, would not pass muster with most historians?

Secondly, such examples do not prove a middling rôle for chance because they all too often rely upon an illegitimate and inarticulate premise, namely, that chance is flung into the picture when two spheres of being collide. When considerations of individual health (medicine) or individual ability (heredity) enter into the public picture of war, politics, and social movement, then chance is invoked as the appropriate explanation of the collision. When Cromer comes down with a cold, when Philip has a strong and able son, when the prickly pear spreads far and wide over Australia, the causation is so obscure to the historian that he relies on chance. But however great the provocation, nothing is gained from such reliance. For while this type of argument might conceivably substantiate a belief in the vital rôle of the individual it proves nothing at all of the case for chance. It requires us to believe that getting a cold is a matter of chance, that Oman has a secret and superior knowledge of the matter which has been denied to the ordinary physician, epidemiologist, or bacteriologist. It requires us to believe that the historian knows more about genetics, psychoanalysis, and plant ecology than specialists in those fields. But however desirous we may be of not sinking a famous incident down into the commonplace stream of causation, we can not prevent that

occurrence by blessing the historian with a high order of knowledge which he absolutely lacks.

A third objection to this major rôle for a middling chance is a negative one—*ad hominem* if you will, but none the less cogent:—historians must grant that the most powerful precedent for the development of laws is that offered by the natural sciences, and these sciences are founded firmly on the rock of determinism.[14] The burden of proof must therefore fall on those who would renounce this precedent, denying that the experience of the natural sciences has blazed the trail for the social sciences, and substitute instead a series of postulates for which we have neither compelling *a priori* support nor the unequivocal testimony of experience. Possibly this substitution can be accomplished, but it is bound to be difficult in the extreme.

It may, however, be that most of this discussion is wide of the mark. It may be that behind the insistence on chance and kismet there is no deep and mystic faith, no extended analysis, no profound epistemology. It may be that there is only the perception of what appears to be a paradox, and it is this which develops so much heat, so many shining examples. For apparently the point at which the unwillingly convinced, but none the less convinced, believer in chance sticks is *an apparently disproportionate relationship between cause and effect*. He sees great oaks growing from little acorns in the space of a day. Yet they obviously should be doing nothing of the sort. Instead of resorting to the inner recesses of facts, to the multiple intricate relationships of history, it seems more honest and easier to concede the battle. Brute fact it apparently is and as brute fact it must be accepted. The only way to accept the superabundant importance of one event is to invoke chance as a support and secret guide for that importance. For once the mistaken evaluation is accepted, there is no way out but to allow some credence to the common belief that miracles and witchcraft are endemic in the world.

[14] I consider it unnecessary to develop the point that the existence of free will does not necessarily mean that man is transported beyond the confining limits of causality, and therefore it can not prevent the development of historical law. First, because "a pure spontaneity [of will] is easily compatible with an absolute determinism, and with all the necessity that results from it" (E. Gilson, *The Spirit of Mediaeval Philosophy*, 1940, p. 310). Clearly the mind of man must have causes for its endeavors, for "if the mind in willing after the manner it does, is excited by no motive or inducement, then it has no end which it proposes to itself or pursues in so doing; it aims at nothing, and seeks nothing" (Jonathan Edwards, *Works*, Vol. 2, 1830, p. 86). Secondly, even if free will did remove men from the chain of cause and effect from time to time, the resulting irregularities—though making prediction difficult—would not make laws impossible.

From the outside the reasoning involved bears a substantial similarity to that immortalized in "credo quia impossibile." From the inside it appears to be a sensible acceptance of the patent fact that the want of a nail may lose an empire. "Great effects may have had small causes," as two distinguished historians have pointed out.[15] "Cleopatra's nose may have made a difference to the Roman empire." Although admitting this "goes against the grain," such repugnance reveals a stiff-necked and refractory spirit. It is "of a metaphysical order; it springs from a preconceived opinion on the government of the world."[16] Just as the novelist can free his fancy by treating of "the fragile and unknown threads [by which] the destinies of nations and the lives of men are suspended,"[17] or the poet vision that breathless time when "twixt two equal armies fate suspends uncertain victory,"[18] so too may the historian deal in the incredible, explaining vast results by trivial circumstances.

But this is too good a thing by half. Under this sign the historian can, in effect, walk upon the waters. Yet his proper task is not to participate in the miracle. It is to patiently evaluate and sort out the intricated acts of history. It is to suspend judgment on the brilliantly improbable and proceed to a detailed historical analysis. The problem here is not whether Cleopatra's nose had any importance. Of course it did. The problem is how much. The question is whether it was enough to substantiate a belief in "the powerful rôle" of such a circumstance. Was it as great as Langlois and Seignobos suggest? Or perhaps less than their Gallic gallantry would admit?

The answer to these questions can not be given if we merely fling contrary guesses at each other. It will be achieved—albeit in rough fashion—by attempting to assess the influence of the other and cooperating factors in the situation. Alexander, to return to our original example, had his particular importance in history. But so too did Philip, creator of the Macedonian empire. So too did the leader who led the left flank at Arbela, and he who once stopped a Persian spear directed at Alexander. Until some final day of illumination in which we may find that Alexander alone was of importance we shall have to assume that these factors bore their coordinate share in the grandeur and slavery of the Macedonian empire.

[15] C. V. Langlois and C. Seignobos, *Introduction to the Study of History* (1909), p. 248.

[16] *Ibid.*

[17] Dumas, *The Three Musketeers.*

[18] Donne, *The Ecstasy.*

To sort out their individual importance, assess weight and influence, is a matter which demands more than violent affirmation or assertion. It requires instead that there be applied to history those practices of controlled observation and calculation of relationships which students of natural science have so assiduously developed and so brilliantly applied. Laboratory experiment is feasible in some social sciences; controlled observation is possible in nearly all, including history.[19] In addition to such general helps history may anticipate considerable value from the development of statistical techniques applicable to populations where measurement is impossible—as, for example, the coefficient of biserial correlation and chi square.[20] With the wealth of experience which fellow natural and social scientists have put at his disposal, the scientific historian should not find his path notably more thorny than that of the astronomer, meteorologist, or paleontologist.[21]

For present purposes precise problems of technique are, however, hardly relevant. The conclusion which it is here desired to establish is that every event is but a portion of a larger whole. As such it has its importance, but it is a contingent importance, *vis-à-vis* other events. While it may be a necessary cause, it can not be a sufficient one: no secular cause is omnipotent or autonomous. The very example used by Oman, namely Cromer's cold, is wholly to the point. For, as Strachey's urbane recital suggests, the destiny of Egypt was not simply constructed out of Gordon's acts and little else beside. It was a mosaic, put together in bits by a host of interacting factors—the religious crochets of the natives, the complex

[19] It can not be sufficiently emphasized that economics, sociology, and other social sciences constantly conduct experiments and develop laws. As a result, such complex resultants as the price of cotton, the demand for automobiles, and the general level of business activity can all be forecast. Cf., for example, Henry Schultz, *The Theory and Measurement of Demand* (1938), and *Journal of the Royal Statistical Society*, Vol. 102 (1939), p. 406.

[20] As Bowley has noted, we may not be able to measure in yards or degrees, yet we may still "be able to detect equality . . . relationship . . . variation . . . and other properties which lead to algebraic expressions." A. L. Bowley, *The Mathematical Groundwork of Economics* (1924), p. 5. For an excellent example of a study using such techniques see Sheldon and Eleanor Glueck, *Criminal Careers in Retrospect* (1943), esp. Ch. 14.

[21] "Facts," remarks one student, "are manipulated in the social sciences in ways which are formally similar to their treatment in the maturer sciences, but with more difficulty," A. E. Heath, "Some Notes on Methodology in the Social Sciences," *Proceedings of the Aristotelian Society*, n.s., Vol. 31 (1931), p. 269. Cf. in the same journal, M. Ginsberg, "Causality in the Social Sciences" (n.s., Vol. 35, 1935, pp. 253–270), and F. J. Teggart's excellent studies, *Prolegomena to History* (1916), *Rome and China* (1942)—a very stimulating example of the forthright search for law—and his article in a symposium on the subject in the *Journal of the History of Ideas*, Vol. III (1942), pp. 3–11.

and redoubtable spirit of Gordon, the ties of home office and colony, and many another potent influence. Charles George Gordon had his place in that scheme, but his highest triumphs were not those of an individual unaided. They were linked in closest intimacy to the achievements of men who were dead and gone before his birth as well as to those of men who lived during his *floruit*. And they were richly sustained by the activity of those who were born long after that estimable gentleman went to his deserved rest. Only through the continuous affirmation which all these other acts gave to the trophies of Gordon's achievement could this cold—which must, after all, have been a rather insignificant respiratory disturbance—have secured so prominent a position in the minds of contemporary historians. The lives of *other* great men all remind us that the future occupants of the Colonial Office and the future inhabitants of Egypt are more than so much historical embroidery around Cromer's life and Gordon's, put there by a mid-Victorian Spirit of History intent upon making the past decorative and cosy. They underline the vital truth and heuristic worth of Whitehead's insistence that every actual occasion is part of every other.[22]

"The stream of history" is a hoary old metaphor, with much that is meaningless but likewise much that is appropriate. For the influence of a single event may be likened to a stream flowing into a great river: at the point of confluence the flow is swift, the mingling of waters turbulent. The stream may appear to be more substantial than it truly is. But in the lower reaches of the river so many other streams have been gathered up, so many snags left by tributaries long since desiccated that it becomes clearly improper to attribute the majestic sweep of the current to any one or any one group of them.

III

It may be of some value to outline briefly the general type of law which the natural sciences have achieved. Even a summary

[22] The reasoning recalls Tawney's felicitously put opinion that "few tricks of the unsophisticated intellect are more curious than the naïve psychology of the business man, who ascribed his achievements to his own unaided efforts, in bland unconsciousness of a social order without whose continuous support and vigilant protection he would be as a lamb bleating in the desert." R. H. Tawney, *Religion and the Rise of Capitalism* (1926), p. 267. Cf. similarly A. L. Rowse, *Science and History* (1928), p. 51 It is of interest that Charles Beard insists that precisely this intertwining of events makes impossible the development of historical law (in his "Written History as an Act of Faith," *American Historical Review*, Vol. 39, 1934, p. 225). Cf. also Oskar Morgenstern's opinion in the *Journal of the American Statistical Association*, Vol. 24 (1929), pp. 152–163. This opinion, however, is an equally compelling proof of the fact that we can not learn to predict the price of hogs, the future demand for wheat, or a host of other eventualities which we do quite well in predicting.

review of the techniques by which these laws were secured, and of the present state of perfection of these laws, may be suggestive, albeit in very rough fashion, of the road which historians might attempt to take. Such a review may also—and this is more valuable for our present purpose—persuade away some of the natural modesty of those historians who feel that no social science can ever achieve the elegant certainties of the natural sciences.

For one thing, historians are apt to forget that those insistent *a priori* obstacles of chance, of irregular causation, of the individuality of events which now confront the social scientist are remarkably like those which at one time plagued the natural scientists. The arguments against law and regularity have changed but little in the last few centuries. Since Hume dramatically stormed the citadel of La Mettrie's too exact mechanistic world, the fashionable philosophy "has been such as to deny the rationality of science. . . . Take for example the following passage (from Hume) . . . . 'In a word, then, every effect is a distinct event from its cause; and the first . . . conception of it, *a priori*, must be entirely arbitrary.' If the cause in itself discloses no information as to the effect . . . it follows at once that science is impossible except in the sense of establishing *entirely arbitrary* connections which are not warranted by anything intrinsic to the natures either of causes or effects. . . . Some variant of Hume's philosophy has generally prevailed among men of science." [23]

Such a criticism is clearly more fundamental than any of those which have been directed at social "sciences," yet even under this staggering objection the natural scientists managed to bear up and pursue their endeavors. For there was a simple, practical rebuttal ready to hand, entirely aside from the possible philosophical answer, such as has perhaps most brilliantly been presented in *Process and Reality*. The answer proved to be less of a denial than a casual ignoring of the whole problem during the daily work of research. "Scientific faith has risen to the occasion, and has tacitly removed the philosophic mountain . . . [the] main recurrences of life are too insistent to escape the notice of the least rational of humans . . . [and therefore] the practical philosophy of mankind has been to expect the broad recurrences" of existence to persist, and upon these to found its laws.[24]

Laws developed in the face of this criticism are by and large not the precise and halcyon laws of legend, but rather rough working summaries, statistical generalizations used for extrapolation into

[23] A. N. Whitehead, *Science and the Modern World* (1925), pp. 15–16.
[24] *Ibid.*

the future. To ratify any given hypothesis a referendum of relevant events—as complete as possible—is taken. The referendum may be secured by experiment, in which ideally only one significant factor at a time will shift, and by consistent variation of that factor we can arrive eventually at a statistical generalization.[25] Sometimes, it is true, the results are sufficient basis for completely exact prediction. More frequently they are not: the magnificent armory of scientific laws includes few of the absolutely rigorous laws which are popularly supposed to be omnipresent in natural science.

In no case can the scientist achieve the quick absolute certainty ascribed to him by the layman. He can not set up a law or negate its possibility in the rather casual fashion employed by many historians. How many centuries of thought and endeavor, after all, were behind the rather elementary discoveries of Galileo's and Stevin's time. Even today, in the very advanced and delicate study of atomic physics, the task is long and the road arduous. "When," says one physicist, "an observation is made on any atomic system that has been prepared in a given way, the result will not in general be determinate, i.e., if the experiment is repeated several times under identical conditions, several different results may be obtained. If the experiment is repeated a large number of times [however] it will be found that each result will be obtained a definite fraction of the total number of times, so that one can say that there is a definite probability of its being obtained at any time the experiment is performed." [26]

As with data of the past and present, so with prediction for the future. Approximate, working accuracy will do. Exactness is generally impossible. "Dans l'état actuel de la physique, il n'y a plus dans le cas des phénomènes élémentaires individuels, prévisibilité rigoreuse des faits qui seront observables à partir des faits qui ont été observés." [27] For example, we may know that A is uniformly followed by a member of the series $B_1, B_2 \ldots B_n$, and that when A does not occur neither does any one of that series. We may therefore call A the cause. But it is clear that since we can

[25] This is often in the form of a probability estimate, which predicts the likelihood of a given plexus of cause and effect occurring in the future. More strictly, probability is the limiting value of the relative frequency of a given experimental result "assumed to be independent of any place selection" and relating to a specific result, or attribute, within a given collective only. Cf. R. v. Mises, *Probability, Statistics and Truth* (1939), p. 38.

[26] Dirac, quoted in L. S. Stebbing, *Philosophy and the Physicists* (1937), p. 84.

[27] L. de Broglie, "Réflexions sur l'indéterminisme en physique quantique," *Travaux du IXe Congrès International de Philosophie* (1937), VII, pp. 6–7.

not determine in advance which of the *B's* will follow, the series is not precisely determinable.[28]

More interesting, perhaps, and certainly of far more *a priori* importance, we can not yet observe any harmonious agreement on the part of scientists as to whether the world, at base, is determinate. All "our means for obtaining exact knowledge of the atomic world" being "essentially inexact," we can prove neither determinism nor indeterminism.[29] But while gusty argument on these fundamental matters continues, there is uniform agreement in practice that the working hypothesis which is most valuable, and most generally applicable is not that of indeterminism or ignorance, but that of determinism. (Historians in their monographic studies make the same assumption. The experiential value—to use James's phrase—of "chance," "fate," or similar terms in detailed analysis is conspicuously small.)

One final point. The scientist, like the historian, is not in search of statistical generalizations merely for their own sake.[30] They are intended as an instrument as well as a trophy of man's unconquerable mind: they are used for the prediction of, and for the explanation of, particular events. An initial full explanation would be a considerable convenience to any scientist. But in order to reach the happy stage of complete illumination the scientist generally finds it expedient to limit the material he considers in connection with each phenomenon. The statistical law beats through a mass of detail, through such facts as the color of the sky during an observation, the size of the room, and other facts which can not in the first instance be considered relevant, in order to arrive at a useful regularity.[31] Now all elements are fundamentally related, and the price of wheat in Canada this year has some effect on the demand for American zippers next year. But initially we must concentrate on the closest, the most intimate, and the most substantial relationships. We must emphasize the use of other parallel instances which may, because of a larger similarity, throw more light on our problem than the last lonely detail concerning the particular instance with which we began. The historian of the reign of Dionysius, for example, can more expeditiously contrast his

[28] De Broglie, *loc. cit.*

[29] C. Bialobrzeski, "Introductory Discourse," *New Theories in Physics* (1939), p. 5. Cf. also E. Schrödinger, *Science and the Human Temperament* (1937), pp. 116, 118.

[30] R. G. Collingwood, "Are History and Science Different Kinds of Knowledge?" *Mind*, Vol. 47 (1922), p. 446.

[31] There is an especially lucid statement on this point in Oskar N. Anderson's article on "Statistics, Statistical Method," *Encyclopedia of the Social Sciences*, Vol. 14, pp. 370–371.

reign with that of other dictatorial leaders than illuminate it with the ultimate details of the rule of the Assembly and the Council of the Bean. Practically, of course, the historian must do both. The matter is primarily one of emphasis. If he is seeking for laws, he will benefit by devoting more time than he ordinarily might to a history of the subject and less to that of the period.

Just how, and how well, the techniques of the natural sciences can apply to the social sciences, and, in particular, to history, is a problem for empirical determination. The historian who seeks historical law must understand them, must adapt them to history, as far as possible, and must work out his own. In pursuing this onerous task he may take what consolation he can from the fact that many of the *a priori* objections which now meet him once confronted—and were overcome by—the natural scientist.

IV

With vision, considerable assiduity, and a certain amount of low cunning in the adaptation of natural science techniques to the practices of historical study, it is conceivable that historians will be able to enlarge their collection of regularities and even of laws. The purpose of this concluding section is to suggest that the constituent materials of history, like those of natural science, are generously and repeatedly ordered. It is on that basis that "the social sciences, like the natural sciences, proceed upon the one great premise that the intricate flux of events can in some way be explained. What appear to be arbitrary and capricious happenings can be fitted into a scheme which has no room for anything but dependable uniformity and regularity." [32]

For however fantastic and disorderly the great plains of human existence may seem to be, there is evident, upon closer examination, an essential substratum of order and monotony. Upon this durable ubiquitous substratum the regularities of history are founded. What, for example, could be more varied, more volatile, than human beliefs—as indeed they are? But can one doubt that the bulk of human beliefs change only at a glacial rate, that acceptance of novelty is as infrequent as it is hesitant? The solid acceptance of what we currently know, the state of belief, is, as one able philosopher has told us, the normal state of the human being. Belief is not "a momentary mode of consciousness" quickly inflamed and readily dissipated. It is on the contrary "a habit

[32] A. A. Young, "Economics as a Field of Research," *Quarterly Journal of Economics*, Vol. 52 (1927), p. 1. "J'ai cru," Montesquieu remarked, in his preface to *L'Esprit des Lois*, "que, dans cette infinie diversité de lois et de moeurs, [les hommes] n'étaient pas uniquement conduits pars leur fantaisies."

of mind essentially enduring for some time, and mostly [at least] unconscious."[33] How often do people choose the "good old ways," and how rare is a mental sport in the millions of decisions and inquiries which are made each day.[34] And even when one occurs—a phase law, the idea of religious tolerance, vaccination—how slowly does such a mutation spread. In our society, for example, where the prospect of monetary reward and fame alike await the introduction of physical invention, novelty is restricted in its appearance by technical and economic considerations.[35] As a result, one student of invention has estimated, some thirty to fifty years have elapsed between the start of serious work on a typical major invention and the time of its commercial success.[36] Thus, while we allow a very distinguished eminence to innovation and irregularity in the long reaches of the past, we can not ignore the highly significant "persistence of aggregates," the rôle of habits which, "by treading the same steps over and over again . . . presently make a road of it, as plain and smooth as a garden-walk, which, when they are once used to, the Devil himself sometimes shall not be able to drive them off."[37]

If the argument of this paper is in general well-founded, then it would follow that historians can derive regularities and laws from the mass of historical events so far as *a priori* considerations are involved. In that endeavor the precedents and techniques of natural science will be at once an incentive and a method ready to hand. In that endeavor the *a posteriori* difficulties should not be overemphasized any more than the *a priori* ones. Nor should anyone be quick to contrast the great accomplishments of natural scientists with the successes of historians, deducing therefrom the past and future failure of historians to develop laws. For how many

[33] C. S. S. Pierce, *Collected Papers*, Vol. 5 (1933), p. 253. Perhaps the most brilliant discussion of the impediments to new thought and deed appears not in Pierce's excellent work but in the opening chapters of James's *Pragmatism*.

[34] The dead weight of the past and the conveniences of the present are jointly of far greater importance in guiding thought than the ability of the mind, drawing upon its own energies, to make and adopt new combinations. For this distinction see Plotinus, *Ennéades*, ed. by E. Bréhier, Vol. III (1925), iii, 1, 10. For a presentation of the facts, see B. J. Stern, "Resistances to the Adoption of Technological Inventions" in *Technological Trends and National Policy* (1937), pp. 39 ff.

[35] For a discussion of some of these see Ruth P. Mack, *The Flow of Business Funds and Purchasing Power* (1941), pp. 286–292; Thurman Arnold, *The Bottlenecks of Business;* and Parts 2 and 3 of the T. N. E. C. *Hearings*.

[36] S. C. Gilfillan, "The Prediction of Inventions" in *Technological Trends and National Policy* (1937), p. 19; and his *Sociology of Invention* (1935).

[37] *Tristram Shandy*.

centuries, after all, were natural scientists content with the number magic of the Pythagorean Tetractys, the mystic chemistry of Paracelsus, the notion of spontaneous generation (which indeed still lived in Pasteur's day)? How many centuries elapsed before the Philosopher's history of animals was superseded by Buffon's speculations or Darwin's researches? History too must have a long apprenticeship as a scientific study, and it is today in its green and salad days, as advanced, perhaps, as chemistry in Priestley's time, or bacteriology in Spallanzani's. History as a study for amateurs is indeed coeval with the natural sciences. But a history designed not only for palatability, and for accurate presentation, but likewise for discerning the regularities of revolution and romance is quite another, and a more recent, matter.

Some of the reasons for the lag are obvious. One reason has been the ability, up until very recently, of any generally able and interested writer to keep abreast of the materials and techniques of history even though not professionally engaged in research. That stage in natural science died with White of Selborne. A second factor has been a preoccupation with temporal periods *per se*—a highly essential and significant portion of historical study but not one designed to produce generalizations more scientific than the vatic conclusions of Spengler and similar students of *Geist*. How more modest achievements, such as historical regularities, could be deduced from the spacious treatment of the classic mode of Purcell, the *Rural Rides* of Cobbett, and the diplomacy of Canning all within the confines of one volume is a not inconsiderable question.

Also significant has been the inability of the average historian to do as profound a job as the average scientist. For the average historian, whether because of a lack of interest, of time, or research facilities, has hardly duplicated the endless patient research, the incessant mulling over an infinitude of similar materials which no small number of scientists have accomplished. And, finally, a very significant factor has been the intimate relationship obtaining between the sciences of the natural world and navigation, farming, travel, and trade. This relationship has provided a constant stimulus to research in the sciences. Today, when the organization of man's political and economic life has become of such paramount interest, many of the social sciences—economic statistics, psychiatry, geography, and a host of others—are making magnificent advances. Surely a more scientific history has its facts and insights to offer toward the solution of these problems. Surely the experience of men under every variety of economic and political circumstance, and under every class of social relationship, must bear some direct relevance to the persistent demand for a brighter, better

world—history, not as chronology, which has been rightly termed "a comedy of burlesque inconsequence," history not as vast generalization in the manner of Comte, Adams, or Grafton Smith, but rather history as the meticulous survey of detail, organized and informed by understanding, as it has always been in the hands of its great practitioners, seeking also to develop techniques for finding out the regularities of history.

Now it may well be that if we had all the experience of the ages heaped up and overflowing, we should still want a solution to those unraveled complexities which plague our century. It is possible —and an ex-president of the American Historical Association has insisted it is also inevitable—that our failure to agree on mere matters of fact, let alone influence and cause, makes fantastic the hope that lessons can be learned from past experience. But unless we would give over that attempt—and where is the historian who will concede history to be merely a placebo?—we must continue the attempt to organize our historical experience by means of generalization and conclusion in the hope that it may increasingly be of practical value. That endeavor can not be efficiently prosecuted while most historians remain adamant in their belief that the task of deriving historical laws is *a priori* impossible.

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COMMENTS AND CRITICISM

HUMAN FREEDOM AND THE LAWS OF NATURE

In his paper "Science and the Foundations of Freedom" in this JOURNAL, Vol. XLI (1944), pp. 113–126, Professor Fries maintains that free will would be impossible if this universe were a "block universe," since no "objective alternatives" would be open to human choice. A block universe, he says, is one with no gaps or openings in it. By "gaps or openings" he means cases of indeterminism, that is, cases in which a given total complex cause could have one effect on one occasion and another effect on another occasion. Professor Fries believes that everything has a cause, but he denies that all the laws of causation are uniform.

He distinguishes the causal connections of things outside of the human mind from what he calls "achieved controls" (p. 124). The former he calls "natural" and he apparently believes that they are uniform. By the latter he means cases where men intervene in external nature; and he says that these are indeterministic. They

involve "gaps" in causal uniformity which create "objective alternatives" for human choice. Then if he regards human intervention in external things as natural he would seem not to believe in the uniformity of nature.

And I suppose that he would locate the indeterminism in the causation of the human wills and choices which direct men's interventions in nature. Presumably his view is that exactly similar total complexes of hereditary and environmental causes, lying back of and producing choices and acts of will, sometimes have one effect and sometimes have another. Perhaps with no change in heredity or environment, a man might choose sometimes one alternative and sometimes another. Otherwise how could there be real freedom or genuine objective alternatives?

But I shall maintain that real freedom can and does exist without any indeterminism.[1] The above analysis of the relations between natural law and freedom is erroneous in its assumption that for human choice to be free it must be unconditioned. The truth is that all freedom is conditioned. When a man chooses and wills and performs one alternative, it is true that he could have chosen and willed and performed another alternative, but only on the condition that he preferred to. He could do the other if, and only if, he preferred to do it. He could not have willed the other alternative if he did not prefer it. Nobody can do anything voluntarily which he does not prefer. And when an individual wills one alternative he never does, at that moment, prefer any other alternative. He could have willed the other if he had preferred to. But he could not have willed it because he did not prefer to. These last two statements do not contradict each other.

Moreover, when he chooses the one, and deliberately foregoes the other, his choice is probably caused in accordance with the probably uniform and inexorable laws of nature. The same total complex of hereditary and environmental causes will very probably produce the same choice every time. And when it does his spirit is in no sense enslaved. The causes of a man's choice force him to incline toward that alternative which he actually takes, but they do not force him to do this against his will. They do not force him to prefer *A* when he would rather have *B*. If they force him to prefer *A*, then he would rather have *A* than *B*. And then real freedom for him consists in getting or doing *A* successfully, always in strict conformity with invariant and inexorable causal laws. Causal com-

[1] I have already discussed this subject in two earlier papers in this JOURNAL, Vol. XXXVIII (1941), pp. 701–712, and Vol. XXXIX (1942), pp. 458–468.

pulsion makes no unfreedom here since it thwarts no will. Freedom is the joyful and triumphant participation of an individual in the uniform and compulsory processes of nature. Nature can be as uniform and as inexorable as it likes, or as it is, and a man is still free when he is victorious in and through its invariant sequences. Thus the wish for human freedom need not drive us to embrace the doctrine of indeterminism.

Moreover, in this deterministic block universe there are real alternatives. When a man chooses *A*, *B* is still a real alternative in case he could have taken *B* had he preferred to, even though, in fact, he could not have taken *B* because he did not prefer to. And then, if "objective" means "real," *B* is an objective alternative. To demand more of an alternative than that it could be chosen and actually taken in case it was preferred is futile. There is really no need that either the choosing and taking of it or the foregoing of it should be uncaused. Nor is there any need that either of these should be caused in an irregular and non-uniform manner.

The slavishness of the human spirit, then, does not consist in the uniform natural causation of preference, choice, and will. Nor is it necessarily produced by this causation. Unfreedom is any one of three things. (1) It is the defeat of conscious purpose. (2) It is any reduction in the number of alternatives which could be chosen and taken in case they were preferred. (3) It is the unconscious processes of nature. Note that the causation of preference, choice, and will, is usually in large measure unfree in this third sense. Human preference, choice, and will can be free, and their unconscious causes can be unfree, without contradiction, provided we define freedom and unfreedom correctly, and provided we use our words in the senses in which we define them.

While I disagree with Professor Fries as to the nature of the distinction between causation as "achieved controls" and as the connections among extra-human (or extra-conscious) phenomena, nevertheless I agree with him that there is a distinction between these. I think that they are both natural and in accordance with inexorable law. But the former is the joyfully conscious participation of a living organism in a uniform causal sequence, while the latter lacks this joyful freedom.

Professor Fries appears to agree with this view of freedom at the start of his paper. He says that "Freedom is understood here naturalistically as the individual's participation in the bio-social forces which shape his destiny" (p. 113). And "freedom has flourished" when " . . . men's interests . . . corresponded with the drift of social forces" (p. 113). That is, freedom is success. Free-

dom is unobstructed volition. Freedom is self-determination. And then, it should be clear, freedom requires no gaps, no indeterminism, no exceptions to natural uniformities. It can and does flourish in many parts of this rigid block universe. But we must know what we mean by freedom. We must define it correctly and we must use it in accordance with our definition. It is as follows: A man is free in every case where he does what he consciously prefers. He is doubly free when he could have done something else if he had preferred to.

In the pragmatic and operational tradition the expression "rigid block universe" is used to mean one in which nature is uniform. And I have so used it here because Professor Fries has used it in this sense. But I do not think that it is an apt expression. For, while nature possesses some features which are permanent, it also possesses others which are changeable. Natural law appears to be among the permanent features, but nearly everything else is mobile. "O earth what changes hast thou seen!" (Tennyson, *In Memoriam*, stanza 123). Every inanimate object is buzzing with activity in its infinitesimal particles, and many also are visibly or measurably in motion. Every living thing is on the move, more or less. The life of man is undergoing the constant or recurrent changes of biological and cultural evolution, the former very slowly, the latter much more rapidly. And I am encouraged to note that much change is progressive. The rise of democracy and the rise of experimental science are outstanding examples of progressive change. These were the work of free men, and both have helped to create more freedom in the world. But none of nature's uniformities had to be violated in order to permit either of these improvements. Both appear to have been caused or determined in accordance with unchanging natural law.

Professor Fries's opposition to determinism is largely based on his enthusiasm for operationalism. As an operationalist he rejects the "dualism" (p. 119) involved in treating the concrete world of pulleys, levers, hydrogen, motors, etc., as appearance, and the abstract material of science, such as atoms, neutrons, equations, formulas, etc., as reality. He insists on the opposite dualism of "the concrete realities of everyday life and the laboratory" (p. 125) in contrast with the abstract material of formulas, theories, etc., which are merely instruments for the control of reality (p. 117). The abstract material, he suggests, is not a copy of the reality (pp. 119, 124). Good science involves "abstract solidarity and generality" (p. 117) in its formulas and in its theories. And if these were a picture of reality, the reality would be a rigid deterministic block.

But they are no picture at all. Scientific theory is just a means of control. This idea is, or is akin to, the pragmatic doctrine that the *truth* of science lies in its efficacy, not in its imitation of its object. True scientific theory might be solid, with no gaps, and yet the reality as to which it was true, might have gaps. And the theory would still be true if it gave control, that is, if it worked.

One must admit that the cogent arguments of scepticism prove that we can not prove for sure that the picture of nature which science gives, or which anything else gives, is a fair copy. And the changes in scientific theory in the past suggest that present theories will be modified in the future, and that the supposed picture of nature which they now present is in some degree inadequate. But still I have an animal faith that there are features in the scientific picture which do correspond to reality, and that one of these features is causal uniformity. The universe impresses me as being that kind of a universe. And I think that the bulk of the scientific work of modern times tends to corroborate this view. I still may be wrong. I can not be absolutely certain about a thing like this. Something might happen some time without any cause. And a total complex cause might repeat itself some time with different effects. Kant was wrong in calling such things inconceivable or impossible. But I am as firmly convinced that they do not really happen as Professor Fries appears to be that his belief in indeterminism truly mirrors reality.

I think that it is important to realize that if indeterminism were true, man would be no freer than he is. Irregularities in the causation of human choices would not give man any greater success than he now has. They would not increase the possible alternatives open to him. Increasing freedom is a matter of removing obstacles, and of increasing rational self-discipline, and, as Professor Fries says, of furthering experimental science. The sort of causation that lies back of the human will, or the lack of any such causation, are both irrelevant to human freedom.

And so, by way of summary and conclusion, my basic thesis has been that one's confidence in the uniformity of nature need not be overthrown in order that one shall respect himself and others as free men.

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BOOK NOTES

The Humanities after the War. Edited, with an introduction, by NORMAN FOERSTER. Princeton, N. J.: Princeton University Press. 1944. viii + 95 pp. $1.50.

The Baconian Lectures, 1943. The Baconian Club of Iowa City, Iowa. Iowa City: University of Iowa. 1943. v+120 pp. 75 cents.

These two little publications have in common an orientation towards post-war conditions, and one common contributor, Professor Foerster. Neither contributes so very much of novelty interesting to the philosopher.

In the Baconian volume Professor Troyer Anderson has a stimulating discussion of social planning, with the rather pessimistic thesis that it takes so long to put any plan into practice that the planner has to be a long-range prophet to be sure his plan will not be made obsolete by technological and other change, before the time it can get accepted. Also today there is the danger that plans will be identified with fascism, and a policy of drift and even reaction identified with true democracy and realistic practicality. Professor Everett Hall urges that psychology, having shown its independence from philosophy, a policy formerly essential to its progress, now needs to turn towards a deeper philosophical examination of its own postulates. President Virgil Hancher has some very acute remarks concerning the college teaching problems after the war.

In the Princeton volume there is much that is good, though not always enough that is constructive. I take it that Aristotle is partly to blame for setting liberal education off on the wrong foot at the very beginning. His education for a free man stressed music and other subjects as ornaments of life, suitable for leisure. For us, we need to emphasize an education that will intensify and make more worth while the whole business of living, rather than something to amuse us in moments of relaxation. Many of the contributors say this in one form or another. The problem is what is to be done now about it—or are we just to return to normalcy when the shooting is over?

Mr. Willkie's address at Duke University is well worth rereading, especially concerning those who wish to police education in the future, in our own country and in conquered lands. And yet just how are we to prevent an education in resentment and revenge without some policing? Even the British success in South Africa, in placating the defeated, was a pretty precarious one. Without

Smuts, what would have happened? In any case, persuasion is better than policing.

There follow papers by Roscoe Pound, Norman Foerster, Theodore M. Greene, Abraham Flexner, William Macneile Dixon, and Gordon Keith Chalmers, among which I rather preferred Foerster and Greene. I shall limit myself to a comment or so about Greene. He gives us an admirable summary of what are the humanities: they involve a belief in some sort of objectivity of values, a mastery of languages, verbal and artistic, a foundation of fact, a senitivity in appreciation, a perspective historical and philosophical, and they should involve a discipline in making reflective commitment. By the last point he means we should definitely take sides, and not be forever balancing alternatives. All this is good, including the last point, which concerns the philosopher most of all. I find myself committed to certain beliefs internally, yet always striving to present the opposing views so well that their advocates would recognize them as their own. A student faced with such a nice balance of alternatives is like the son of wise and thoughtful parents, who is never punished but always reasoned with, and never enjoys a child's birthright of a big family fracas, with tempers and spankings. Such children grow up to be the nice boys in school, conscientious and repressed, and lead the class in grades, and never amount to anything in the long run. For success without emotion turns to ashes when it has been won. Creation requires emotion, and emotion a certain partisanship. I learned most from my own philosophy teachers when they were most partisan in flinging out their own opinions as a challenge to all comers.

What Professor Greene says about objectivity of values could be discussed at great length. Of course we must have an objectivity that gives us some distinction between great art and trash. Protagoras must be wiser than the dog-faced baboon. But does that mean that values must be endowed with reality, in the sense that they are endowed with power? Acton's famous theorem that power corrupts and absolute power corrupts absolutely—does that apply to values, and in particular, does it apply to the Deity? I am just enough influenced by Mr. Santayana's scruples concerning endowing the ideal with power to want to debate the question before deciding. Professor Royce used to say the great problem of theology is how the existence of God can be reconciled with morality! It is a big question, this of the relation of value to existence, and the objectivity of values.

H. T. C.

El juego metafísico. (Para una filosofía de la finitud). CARLOS ASTRADA. Buenos Aires: Librería el Ateneo. 1942. 165 pp. $4 m/arg.

Carlos Astrada is in all probability the most fervent Argentine disciple of Martin Heidegger, whose "existential philosophy," in spite of its terminological and other difficulties, has been perhaps unduly fashionable in recent years in Latin America.

The above volume is divided into three parts. The first part defends and analyzes the conception of philosophy as "primordial play," inspired by Heidegger's statement that: "We do not play because there are games, but there are games because we play." The second part gives this conception an historical background, which culminates in Kierkegaard and Heidegger. The third part applies the foregoing concept to the philosophy of Max Scheler, describing it as the "game of Eros" in the Platonic sense.

Philosophy as "primordial play" means that it is a "dramatic adventure," not in ideas abstractly considered, but in the "comprehension of being" which each man concretely experiences through his "personal vision" of the world in which *he* lives. To philosophize is "to transcend" things, including one's self, and thereby realize through time one's own finitude. The mystic, the author observes with acumen, plays a dirty trick and fouls in the game of thought by attempting to hide his finitude and save himself in God. Only the genuine metaphysician has a sense of "fair play" and is a good sport to the very end.

Professor Astrada carefully admits that his conception of philosophy as a "game" relativizes its validity. He asserts that no *Weltanschauung* whatever can be "universally true and valid," for it is an "individual product, historically conditioned and, consequently, only true and valid for the individual who for some inner metaphysical necessity has formulated it." But, unfortunately, he admits all this with pride rather than with prejudice, and makes a virtue out of necessity. Assuming that philosophy is a "metaphysical game," does it not have fixed rules and a determinate goal like all other games? Are there not good shots and bad ones in any game? One thing, however inescapable our predicament, is the *psychology* of philosophy; another thing, however difficult our attainment, is its *logic*.

P. R.

Esquema de un correlato antropológico en la jerarquía de los valores. J. R. GARCÍA BÁRCENA. Havana: Privately printed. 1943. 17 pp.

This suggestive pamphlet by a young poet from Cuba on "the anthropological correlate of the hierarchy of values" is written

from the standpoint of Schelerian axiology. Beginning with the basic assumption of the objectivity of values, it analyzes the subjective pole under two headings: the "epistemological aspect" and the "ontological aspect."

With respect to the latter aspect, the author concludes that the hierarchical structure of the world and man corresponds with the hierarchical structure of values. And with respect to the former aspect, he concludes that we know by "intuition" *that* there is a hierarchy of values and that we also know by "intuition" *what* it is. But *whose* intuition is the criterion of value? Just as in the realm of knowledge, so likewise in the realm of value, there is distortion. Hence, the intuition of the *normal* valuer must be set up as the criterion of value. From this normal point of view, "spiritual" values are higher than "biological" values; and, within the field of the first, the ascending order of values is as follows: logical, esthetic, ethical, and religious. Moreover, within each of the four forms of spiritual value, there is a gradation ranging from lower to higher. The hierarchy of the four forms is not absolutely vertical, because a higher grade of logical value, such as Aristotle's *Metaphysics*, may be superior to a lower grade of esthetic value, such as a sonnet. However, it is insisted that the highest grade of esthetic value is superior to the highest grade of logical value. Now, which is higher in value: Aristotle's *Metaphysics* or Dante's *Divine Comedy*? The pamphlet raises the question, but does not answer it, notwithstanding the analysis presented. Is the question answerable? Is it a meaningful question?

In spite of this axiological strait-jacket, the author is sensitive enough to see that, for example, it pays for a physician to tell a lie, that is, commit a logical sin, in order to save or help to save the life of his patient, which is a biological value. Furthermore, if the choice should be between saving a life, whether one's own or another's, and saving a cathedral, the author is willing to have the cathedral sacrificed because it is merely an instrument of religious value. This timely argument can be and has been applied to the war, especially in connection with the Eternal City of Rome. Yet the rejoinder, given the above hierarchy of values, could easily be and has been that the cathedral is an artistic value too and, as such, is higher than any biological value. This rejoinder would lose its force only if it can be shown (which the author fails to do explicitly) that saving lives is not just a matter of biological but religious value as well. After all, any decent God would prefer worshippers to places of worship.

P. R.

Thomas Paine. Representative Selections, with Introduction, Bibliography, and Notes. Edited by HARRY HAYDEN CLARK. (American Writers Series.) New York: American Book Company. 1944. cli + 436 pp. $1.60.

As general editor of the valuable American Writers Series, Professor Clark has established a very high standard to which, as editor of this volume of selections from Thomas Paine, he adheres. The introduction, a closely documented appraisal of Paine's intellectual system based upon recent monograph studies by various authors as well as upon a careful study of the writings of Paine, is clear and balanced. It represents an attempt, in the line of modern study of Paine, to de-emphasize the importance of Paine's Quaker background to his thought, and thus to offset the over-emphasis on this influence introduced by Moncure Conway. Clark's analysis affirms the greater significance of Newtonianism to Paine, and thus restores Paine's Deism rather than his humanitarianism to a central position.

The selections are well-chosen and, as far as *The Rights of Man* and *The Age of Reason* are concerned, deservedly full. It seems to this reviewer a pity that space could not be made for the inclusion of the brief *Dissertation on the First Principles of Government* (1795), in which there is so clear an exposition of the author's more restrained ideas on suffrage, property rights, and constitutions. The loss, however, is hardly irreparable, since many of these points are developed in *The Age of Reason.* The chronological table of Paine's life and writings, the notes, and the excellent selective annotated bibliography are valuable additions to the work.

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